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## SYNOPSIS OF THE PUERTO RICAN BEETLES OF THE GENUS MORDELLISTENA, WITH DESCRIPTIONS OF NEW SPECIES <sup>1</sup>

By EUGENE RAY

THE specimens of mordellid beetles treated herein were received for study from the United States National Museum and Prof. S. T. Danforth, of the University of Puerto Rico. All the types of new species, including those sent by Professor Danforth, are now deposited in the National Museum.

Four species of the genus *Mordellistena* were previously known from the island of Puerto Rico. Ten new species are added in this paper. These may be separated by use of the accompanying key. The short subapical ridge on the posterior tibiae is omitted in the notes and descriptions.

### Genus MORDELLISTENA Costa

*Mordellistena* COSTA, Fauna del regno di Napoli. . . , Coleoptera, vol. 1, Mordellidae, p. 16, 1853.

#### KEY TO THE PUERTO RICAN SPECIES OF MORDELLISTENA

- |  |   |
|--|---|
| 1. Basal ridge of hind tibiae extending halfway across outer surface (fig. 28, b)----- | 2 |
| Basal ridge of hind tibiae extending entirely across outer surface (fig. 28, c)-----   | 9 |
| 2. Derm of head and thorax unicolorous-----  | 3 |
| Derm of head and thorax bicolorous-----  | 5 |

<sup>1</sup> Contribution from the Entomological Laboratories of the University of Illinois, no. 182.

3. Ventral surface, including legs, entirely unicolorous; total length  
not more than 2.5 mm----- 4  
Ventral surface bicolorous, abdomen annulate with alternate  
castaneous and fuscous bands----- **annuliventris** Quedenfeldt
4. Five basal segments of antennae flavous, rest black; head,  
thorax, and ventral thoracic segments piceous- **angustiformis**, new species  
Entire body surface flavous----- **ferruginea** (Fabricius)
5. Distal segment of maxillary palpi triangular (fig. 28, *d-f*)----- 6  
Distal segment of maxillary palpi club-shaped (fig. 28, *g*).  
**varietas**, new species
6. Hind basitarsus with three oblique ridges (fig. 28, *c*)----- 7  
Hind basitarsus with two oblique ridges (fig. 28, *b*).  
**signaticollis** Quedenfeldt
7. Elytra less than three times as long as broad----- 8  
Elytra more than three times as long as broad----- **marginicollis** Mäklin
8. Antennal segments 3 and 4 equal in length, segments 4 and 11  
black, extreme apices ridged with flavous----- **danforthi**, new species  
Antennal segment 4 distinctly longer than 3, segments 4-11  
entirely fuscous----- **humeralis**, new species
9. Second segment of hind tarsus with one ridge (fig. 28, *b*)----- 10  
Second segment of hind tarsus with two ridges (fig. 28, *c*)----- 11
10. Segments 5-10 of antennae each as long as 3 and 4 together,  
segment 11 one-fourth longer than 10----- **lineata**, new species  
Segments 5-10 of antennae each no longer than 4 alone, seg-  
ment 11 almost twice as long as 10----- **barberi**, new species
11. Anterior tibiae slender----- 12  
Anterior tibiae with a knifelike form (fig. 28, *h*)----- **leai**, new species
12. Base of elytra with a Y-shaped spot surrounding scutellum (fig.  
28, *l*); elytra almost three times as long as broad- **y-nigrum**, new species  
Elytra lacking Y-shaped scutellar spot; elytra less than two  
and one-half times as long as broad----- 13
13. Distal segment of maxillary palpus with concave outer margin;  
basitarsus of hind legs with two oblique ridges (fig. 28, *b*).  
**lucidovirga**, new species  
Distal segment of maxillary palpus with straight outer margin  
(fig. 28, *e*); basitarsus of hind legs with three oblique ridges  
(fig. 28, *c*)----- **ephippium**, new species

**MORDELLISTENA ANNULIVENTRIS** Quedenfeldt

*Mordellistena annuliventris* QUEDENFELDT, Berliner Ent. Zeitschr., vol. 30, p. 126, 1886.

One specimen: Aibonito, Puerto Rico, July 23, 1934 (R. G. Oakley).

**MORDELLISTENA ANGUSTIFORMIS**, new species

FIGURE 28, *b*

This species may be separated from *signaticollis* Quedenfeldt (1886, p. 125) by the black derm of the head and thorax, the absence of a black marginal line on the elytra, and the single oblique ridge on the second segment of hind tarsi.

Length: 1.85 mm; including anal style, 2.45 mm. Elongate, subparallel. Derm generally black; elytra castaneous with a narrow,

piceous, sutural line; anterior and middle legs and hind tibiae and tarsi flavous; basal five segments of antennae and maxillary palpi flavous. Body densely covered with fine, recumbent, flavocinereous pubescence.

Antennae 0.5 mm long, reaching posterior coxae; segment 4 one-half longer and distinctly broader than 3; 5–10 each as long as 4 and slightly broader; 11 rounded, slightly longer than 10. Apical segment of maxillary palpus enlarged, triangular, sides straight, corners rounded. Prothorax broader than long (0.65 by 0.5 mm), sides rounded, base arcuate, midbasal lobe short, rounded. Scutellum small, triangular. Elytra slightly more than twice as long as broad (1.35 by 0.65 mm), sides subparallel, apices individually rounded. Posterior tibiae with two equal oblique ridges extending halfway across outer face; posterior basitarsus with two oblique ridges, second segment with one oblique ridge. Anal style but twice as long as apical ventral segment, stout, evenly attenuate, truncate at apex.

*Type locality*.—Yauco, Puerto Rico.

*Type*.—Male, U.S.N.M. no. 51597.

*Remarks*.—The type was collected at Yauco on June 15, 1934 (C. M. Matos); the allotype was collected at Adjuntas on June 1, 1934 (R. G. Oakley). There is no visible external difference between the sexes.

#### MORDELLISTENA FERRUGINEA (Fabricius)

*Mordella ferruginea* FABRICIUS, Systema eleutheratorum. . . , vol. 2, p. 124, 1801.  
*Mordellistena ferruginea* QUEDENFELDT, Berliner Ent. Zeitschr., vol. 30, p. 127, 1886.

Eleven specimens: Two from Aibonito, June 8, 1934 (C. M. Matos); seven from Juana Diaz, April 10, 1933, on *Inga laurina* (R. G. Oakley); one from Ponce, January 3, 1933, on leaf of banana (R. G. Oakley); one from Barceloneta, April 25, 1933 (R. G. Oakley).

#### MORDELLISTENA VARIETAS, new species

##### FIGURE 28, *g, k*

From *signaticollis* Quedenfeldt (1886, p. 125) this species may easily be separated by the black color of the elytra and the different shape of the distal segment of the maxillary palpus.

Length: 2.8 mm; including anal style, 3.9 mm. Elongate-oval, sides narrowly rounded; head flavous, vertex with a rounded fuscous spot almost reaching eyes and occiput; pronotum flavous with a median fuscopiceous stripe, broadest at base and embracing the entire midbasal lobe; antennae flavous at base, piceous at apex, intermediate segments successively darker toward distal end; sternal sclerites of thorax and elytra wholly piceous; maxillary palpi, legs, and ventral abdominal segments castaneous. Body densely covered with fine recumbent pubescence, generally partaking of ground color.

Antennae 0.85 mm long, reaching base of metasternum; segment 4 one-half longer than 3; 5-10 each as long as 4 and slightly broader; 11 rounded, no longer than 10. Apical segment of maxillary palpi enlarged, club-shaped, broadest subapically, then rounded to distal end. Pronotum but slightly broader than long (0.75 by 0.7 mm), convex, sides margined, basal angles obtuse, midbasal lobe broad, rounded. Scutellum small, triangular. Elytra almost two and one-half times as long as broad (2.1 by 0.8 mm), sides distinctly rounded, apices individually curved. Posterior tibiae with two oblique equal ridges extending halfway across outer face; posterior basitarsi with three oblique ridges, basal one rudimentary, second segment with two such ridges. Anal style almost three times as long as apical ventral segment, rather thick and truncate at apex.

*Type locality*.—Adjuntas, Puerto Rico.

*Type*.—Male, U.S.N.M. no. 51598.

*Remarks*.—The type was collected at Adjuntas on March 24, 1933, on orange leaf (R. G. Oakley); the allotype was collected at Villalba on June 21, 1934 (C. M. Matos); a male paratype was collected at Maricao on July 2, 1917 (H. Morrison). No visible external differences in the sexes were noted.

MORDELLISTENA DANFORTHII, new species

FIGURE 28, *i*

This species may be separated from *indistincta* Smith (1882, p. 93) by the bicolorous antennae and ventral abdominal segments and by the broader distal segment of the maxillary palpi.

Length: 2.4 (male) and 2.3 (female) mm; including anal style 3.5 (male) and 3.2 (female) mm. Elongate, subparallel; dermal color flavous, except for the following fuscous areas: Eyes, seven apical segments of antennae, scutellum, elytra (except a broad, light, humeral spot extending along base to suture), three apical ventral abdominal segments (except at apex), apical two-thirds of anal style, and ridges and apical setae of hind tibiae and tarsi. Surface densely covered with fine recumbent pubescence, partaking of ground color, except on fuscous portion of elytra, where it is golden.

Antennae 1 mm long, reaching base of abdomen; segments 3 and 4 equal; 5-10 each one-third longer and slightly broader than 4; 11 rounded, slightly longer than 10; apical segment of maxillary palpi enlarged, elongate-triangular. Prothorax slightly wider than long (0.75 by 0.7 mm), sides rounded, base arcuate, midbasal lobe short, rounded. Scutellum small, subtriangular. Elytra slightly more than twice as long as broad (1.7 by 0.8 mm), sides parallel, apices rounded. Hind tibiae with two oblique ridges extending halfway across outer face; basitarsi with three, second segment with two

oblique ridges. Anal style almost three times as long as apical ventral segment, attenuate to apex.

The abdominal segments of the female (except anal style) lack the fuscous coloration of the male, and the general castaneous color is lighter. The prothorax and the elytra are narrower than in the male.

*Type locality*.—Villalba, Puerto Rico.

*Type*.—Male, U.S.N.M. no. 51599.

*Remarks*.—Both the type and allotype were collected at Villalba on June 21, 1934, by C. M. Matos. This species is dedicated to Prof. S. T. Danforth for his kindness in permitting the writer to study his collection of Puerto Rican Mordellidae.

MORDELLISTENA HUMERALIS, new species

FIGURE 28, a

This species may be separated from its closest ally *militaris* LeConte (1862, p. 49), by the bicolored antennae and ventral abdominal segments and by the broader terminal segment of the maxillary palpi.

Length: 2.6 mm; including anal style, 3.8 mm. Elongate, subparallel; derm generally black, with the following exceptions: Clypeus and front narrowly, humeri of elytra broadly, inner edge of this spot diagonal, almost reaching suture, extending nearly one-half entire length, flavocastaneous; antennae with three basal segments and extreme apex of succeeding segments, maxillary palpi, and legs, flavous; medioanterior part of metasternum, basal abdominal segment wholly, and apical margins of succeeding segments, piceocastaneous. Body densely covered with fine recumbent pubescence, cinereous dorsally, whitish ventrally.

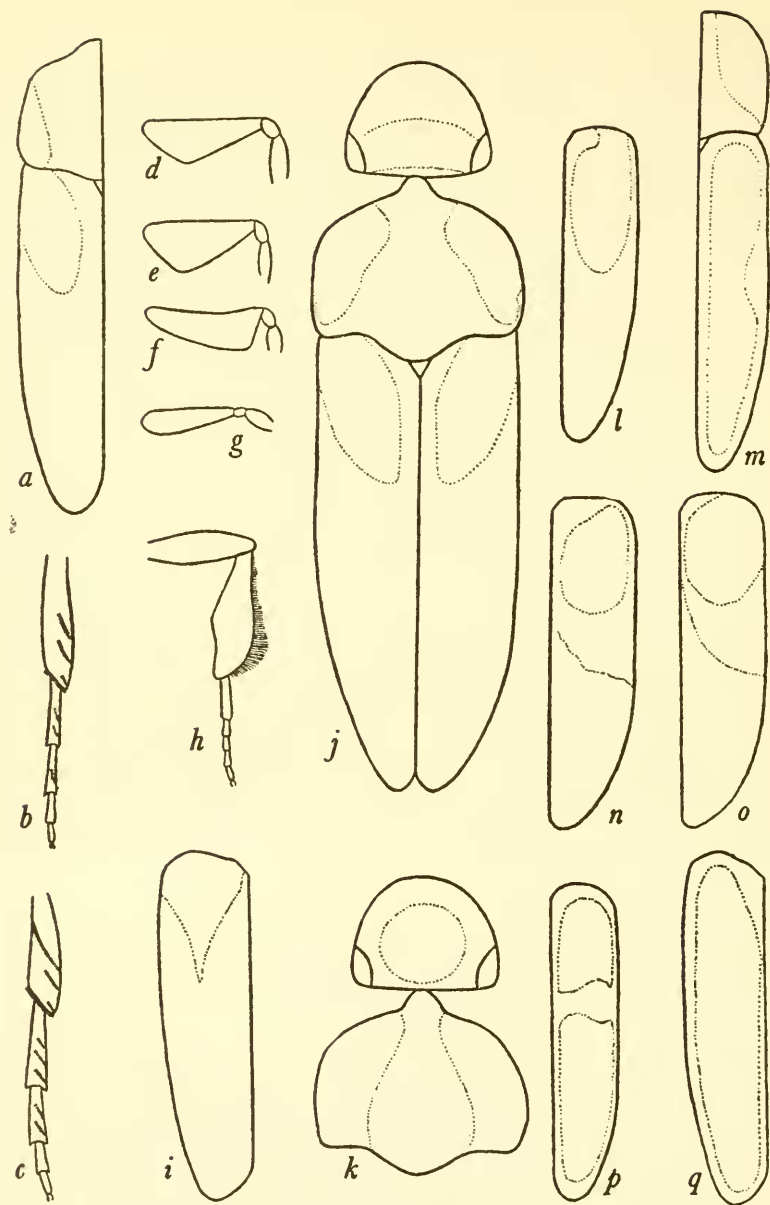
Antennae 0.6 mm long, reaching base of abdomen; segment 4 one-third longer than 3; 5-10 each as long as 3 and 4 combined and each broader; 11 rounded, but little broader than 10. Terminal segment of maxillary palpi enlarged, broadly triangular. Pronotum but slightly broader than long (0.75 by 0.67 mm), convex, sides finely margined, basal angles obtuse, midbasal lobe rounded, one-third width of pronotum. Scutellum small, subtriangular. Elytra almost two and one-half times as long as broad (1.95 by 0.8 mm), sides parallel for four-fifths their length, then rounded to suture. Hind tibiae with two oblique, equal ridges extending halfway across outer face; basitarsi with three, second segment with two ridges. Anal style two and two-thirds as long as apical ventral segment, attenuate to apex.

*Type locality*.—Villalba, Puerto Rico.

*Type*.—Male, U.S.N.M. no. 51600.

*Remarks*.—The single specimen at hand was collected at Villalba on June 21, 1934, by C. M. Matos.



FIGURE 28.—New species of *Mordellistena*

- a. *M. humeralis*: Right side.  
 b. *M. angustiformis*: Hind tibia and tarsus.  
 c, e, p. *M. ephippium*: c, Hind tibia and tarsus; e, maxillary palpus; p, elytron.  
 d, n, o. *M. barberi*: d, Maxillary palpus; n, elytron of female; o, elytron of male.  
 f, m. *M. lucidorirga*: f, Maxillary palpus; m, right side.  
 g, k. *M. varietas*: g, Maxillary palpus; k, dorsal view of head and pronotum.  
 h, j. *M. leai*: h, Anterior leg; j, dorsal view.  
 i. *M. danforthi*: Elytron.  
 l. *M. y-nigrum*: Elytron.  
 q. *M. lineata*: Elytron.

## MORDELLISTENA LINEATA, new species

FIGURE 28, q

This species is most closely allied to the North American *ancilla* LeConte (1862, p. 50), which it resembles in coloration; it may immediately be separated by its larger size and the smaller number of ridges on the posterior tarsi.

Length: 2.1 mm; including anal style, 2.9 mm. Elongate, subparallel; dermal color black, except for the following flavocastaneous areas: Front of head, maxillary palpi, seven apical segments of antennae, a broad median stripe on elytra, reaching base at humeri and extending to apex, anterior and middle legs, and hind trochanters, tibiae, and tarsi. Surface densely covered with recumbent pubescence, silvery everywhere, except on flavocastaneous areas, where it partakes of ground color.

Head convex; antennae 0.8 mm long, reaching base of abdomen; segments 3 and 4 equal; 5-10 each as long as 3 and 4 together; 11 rounded, one-fourth longer than 10. Apical segment of maxillary palpi enlarged, form of an isosceles triangle. Prothorax slightly broader than long (0.65 by 0.6 mm), sides rounded, base arcuate, mid-basal lobe short, subtruncate. Scutellum small, triangular. Elytra slightly more than twice as long as broad (1.5 by 0.7 mm), sides slightly curved, apices individually rounded. Posterior tibiae with two oblique ridges, the basal one extending entirely across outer face, the other as long as half width of tibia; basitarsi with two oblique ridges, second segment with one. Anal style almost three times as long as apical ventral segment, attenuate to apex.

*Type locality*.—Guanica, Puerto Rico.

*Type*.—Male, U.S.N.M. no. 51601.

*Remarks*.—Both the type and allotype were collected at Guanica on June 26, 1934, by C. M. Matos. There is no visible external difference in the sexes.

## MORDELLISTENA BARBERI, new species

FIGURE 28, d, n, o

This species may be separated from its closest ally, *lineata*, by the comparatively longer length of antennal segments 3 and 4, the different maculation of the elytra, and the smaller size.

Length: 1.65 mm; including anal style, 2.3 mm. Elongate, subparallel; derm bicolored, mostly yellowish white, except for the following fuscipiceous areas: Sides of mesosterna and metasterna, an area on elytra surrounding scutellum, and a transverse, premedian, elytral fascia, broadened at sides, and narrowly extending along suture to basal area. Surface densely covered with fine recumbent pubescence, partaking of ground color.

Antennae 0.5 mm long, reaching metasternum; segments 3 and 4 equal; 5-10 each slightly broader but no longer than 4; 11 rounded, almost twice as long as 10. Apical segment of maxillary palpi enlarged, form of an elongate scalene triangle, sides straight, corners rounded. Pronotum slightly broader than long (0.5 by 0.45 mm), convex, sides finely margined, basal angles obtuse, midbasal lobe distinct, broadly rounded. Scutellum small, triangular, broader than long. Elytra twice as long as broad (1.2 by 0.6 mm), sides gently curved, apices individually rounded. Posterior tibiae with two oblique ridges, the basal extending entirely across outer face; basitarsi with two oblique ridges, second segment with one oblique ridge, all extending halfway across outer surface. Anal style more than two and one-half times as long as apical ventral segment, slender, truncate at apex.

The female has the pronotum entirely black. The scutellar area of the elytra is more extensive than in the male, reaching the lateral margins, and the black sutural line is somewhat broader.

*Type locality*.—Ponce, Puerto Rico.

*Type*.—Male, U.S.N.M. no. 51602.

*Remarks*.—The type and allotype were taken at Ponce on April 29, 1933, on leaf of "moca" by R. G. Oakley; a female paratype was taken at Juana Diaz on February 23, 1933, on coffee leaf by R. G. Oakley. Here occurs one of the most striking cases of sexual dimorphism noted in the Mordellidae, the difference in color at once enabling an observer to separate the sexes.

This species is dedicated to H. S. Barber, for his kindness in arranging for the transmittal of specimens described herein and for other favors. The pin label of the type in Mr. Barber's handwriting indicates its undescribed condition.

MORDELLISTENA LEAI, new species

FIGURE 28, *h, j*

The expanded condition of the anterior tibiae in this species adequately separates it from any other known member of the genus. Superficially it resembles *signaticollis* Quedenfeldt (1886, p. 125) and *marginicollis* Mäklin (1875, p. 590).

Length: 2.4 mm; including anal style, 3.6 mm. Elongate, subparallel; derm black, except for the following flavous areas: Anterior part of head from a point beginning midway between eyes, and a narrow transverse line at base, sides of pronotum (broadest at anterior angles), a humeral spot on elytra extending one-third entire length and touching neither suture nor margins; antennae with four basal segments flavous, remainder fuscous, maxillary palpi and legs flavous (except hind femora). Surface densely covered with fine, short, recumbent pubescence, generally yellowish in color.



Antennae 1 mm long, reaching base of abdomen; segments 3 and 4 short, equal; 5-10 each slightly broader and as long as 3 and 4 together; 11 rounded, slightly longer than 10. Apical segment of maxillary palpi enlarged, with the form of an isosceles triangle, rounded at corners. Prothorax slightly broader than long (0.65 by 0.6 mm), sides rounded, base arcuate, midbasal lobe short, but evenly rounded. Scutellum small, triangular. Elytra two and one-half times as long as broad (1.8 by 0.7 mm), sides gently acuminate, apices individually rounded. Anterior tibiae enlarged, flattened, somewhat knifelike, dorsal edge fringed with fine, flexible hairs; posterior tibiae with two ridges, the anterior extending entirely across outer face; basitarsi and second segment each with two ridges, extending halfway across outer surface. Anal style more than three times as long as apical ventral segment, slender, attenuate to apex.

*Type locality*.—Bayamon, Puerto Rico.

*Type*.—Male, U.S.N.M. no. 51603.

*Remarks*.—The type was collected at Bayamon on April 26, 1934, by "Lesne et al."; a male paratype was collected at Maricao on July 2, 1917, by H. Morrison.

MORDELLISTENA Y-NIGRUM, new species

FIGURE 28, 1

The Y-shaped black spot on the region of the elytra surrounding the scutellum adequately separates this species from other allied forms. In a systematic arrangement it should be placed between *leai* and *lucidovirga*.

Length: 2.25 mm; including anal style, 3.1 mm. Elongate, subparallel; derm black, except for the following castaneous areas: Clypeus, basal half of elytra (enclosing a Y-shaped black spot surrounding scutellum and extending posteriorly on suture to middle), basal abdominal segment wholly, the remaining ventral segments along ventral margins, posterior legs, four basal segments of antennae; maxillary palpi and two anterior pairs of legs, whitish. Surface densely covered with fine recumbent pubescence, partaking of ground color, except on black areas, where it is golden.

Antennae 1 mm long, slender, reaching posterior coxae; segments 3 and 4 equal; 5-10 each one-half longer but no broader than 4; 11 rounded, but slightly longer than 10. Apical segment of maxillary palpi enlarged, form of a scalene triangle, sides straight, angles rounded. Pronotum distinctly broader than long (0.7 by 0.6 mm), sides rounded, basal angles obtuse, midbasal lobe distinct, rounded. Scutellum small, rounded. Elytra more than twice as long as broad (1.65 by 0.7 mm), sides gently rounded, apices individually curved. Posterior tibiae with two oblique ridges, the anterior extending en-

tirely across outer face; basitarsi and second segment each with two oblique ridges, all extending halfway across outer surface. Anal style three times as long as apical ventral segment, slender, attenuate to apex.

*Type locality*.—Juana Diaz, Puerto Rico.

*Type*.—Male, U.S.N.M. no. 51604.

*Remarks*.—The type and a male paratype were both taken at Juana Diaz on April 10, 1933, on leaf of *Inga laurina* by R. G. Oakley.

MORDELLISTENA LUCIDOVIRGA, new species

FIGURE 28, *f, m*

This species is most closely allied to *ephippium*, described below, and can be separated by the different color and maculation of the entire body, the two ridges on the hind basitarsus, and the different shape of the terminal segment of the maxillary palpus.

Length: 2.15 mm; including anal style, 3 mm. Elongate, narrowly subcuneate; derm of head and thorax fuscous with fuscocastaneous margins; elytra piceous, with a broad castaneous discal stripe extending from base almost to apex; antennae fuscocastaneous; maxillary palpi and legs flavous, except posterior femora, which are black; ventral surface piceous. Surface densely covered with fine recumbent pubescence, partaking of ground color.

Antennae 0.75 mm. long, reaching posterior coxae; segments 3 and 4 equal; 5–10 each one-half longer but very little broader than 4; 11 rounded, slightly longer than 10. Apical segment of maxillary palpi enlarged, triangular, outer margin concave, other sides straight, corners rounded. Pronotum slightly broader than long (0.65 by 0.6 mm), sides rounded, base arcuate, midbasal lobe short, rounded. Scutellum small, triangular. Elytra almost three times as long as broad (1.55 by 0.65 mm), sides narrowly rounded, apices individually curved. Posterior tibiae with two oblique ridges, the anterior extending entirely across outer face; basitarsus and second segment each with two ridges, each extending halfway across outer surface. Anal style two and one-half times as long as apical ventral segment, stout, truncate at apex.

*Type locality*.—Maricao, Puerto Rico.

*Type*.—Female, U.S.N.M. no. 51605.

*Remarks*.—The type, a unique, was taken at Maricao on July 2, 1917, by H. Morrison.

MORDELLISTENA EPHIPPIMUM, new species

FIGURE 28, *c, e, p*

The separation of this form from its closest ally, *lucidovirga*, has been recorded under the description of the latter species.

Length: 2.25 mm; including anal style, 3.25 mm. Elongate, subparallel, derm flavous, except for the following piceous areas: Margins and suture of elytra and a premedian, transverse fascia, which is broadest near side margins. Surface densely covered with fine, recumbent, flavous pubescence, except on anal style, where color is fuscous.

Antennae 0.8 mm long, reaching posterior coxae; segments 3 and 4 equal; 5-10 each one-half longer and considerably broader than 4; 11 rounded, one-half longer than 10. Apical segment of maxillary palpi enlarged, form of a scalene triangle, sides straight, corners rounded. Prothorax slightly broader than long (0.6 by 0.55 mm), convex, sides rounded, basal angles obtuse, midbasal lobe short, subtruncate. Scutellum small, triangular. Elytra almost three times as long as broad (1.7 by 0.6 mm), sides subparallel, apices individually rounded. Posterior tibiae with two oblique ridges, the anterior extending entirely across outer face; basitarsi with three oblique ridges, second segment with two, all extending halfway across outer surface. Anal style twice as long as apical ventral segment, attenuate to apex.

*Type locality*.—Aibonito, Puerto Rico.

*Type*.—Male, U.S.N.M. no. 51606.

*Remarks*.—The type was taken at Aibonito on June 8, 1934; the allotype was taken at Ponce on September 11, 1933. Both were collected on *Eugenia* sp. by R. G. Oakley.

# LITERATURE CITED

FABRICIUS, JOHANN CHRISTIAN.

1801. Systema eleutheratorum secundum ordines, genera, species, etc., vol. 2, 687 pp.

LECONTE, JOHN LAWRENCE.

1862. Synopsis of the Mordellidae of the United States. Proc. Acad. Nat. Sci. Philadelphia, vol. 14, pp. 43-51.

MIKLIN, FREDRIK WILHELM.

1875. Neue Mordelliden. Acta Soc. Sci. Fennicae, vol. 10, pp. 561-595.

QUEDENFELDT, GUSTAV.

1886. Neue und seltene Käfer von Portorico. Berliner Ent. Zeitschr., vol. 30, pp. 119-128, 1 fig.

SMITH, JOHN BERNARD.

1882. A synopsis of the Mordellidae of the United States. Trans. Amer. Ent. Soc., vol. 10, pp. 73-100, 3 pls.